

The effect of supply chain corporate social responsibility (CSR) program on small business innovation through entrepreneurial orientation

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ABSTRACT

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This research aimed to examine the effect of the model of Corporate Social Responsibility (CSR) Programs on SME Innovation (SI) by involving Entrepreneurial Orientation (EO) as the mediating variable. This quantitative research used a Structural Equation Model (SEM) analysis technique with SEM-PLS 3.2.9 software. Respondents in this research were small businesses as mitra binaan of the Oil and Gas SOE in West Java Province, consisting of 87 small businesses or enterprises engaged in fashion, food, beverages, toys, and educational props. Sampling was done using a purposive random sampling technique. The results showed that CSR programs had a significant direct effect on Entrepreneurial Orientation and SME Innovations. It was also found that Entrepreneurial Orientation was significantly and directly correlated with SME Innovations. CSR programs had a significant indirect effect on SME Innovations through Entrepreneurial Orientation. The study confirmed that CSR programs impacted SME Innovations by involving entrepreneurial orientation to strengthen the influence of CSR programs on small businesses.

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1. Introduction

The introduction of sustainability development influences the definition of CSR. The Organization for Economic Cooperation and Development (OECD) views CSR as a business contribution to sustainable development. Corporate behaviors should not merely guarantee profits for shareholders, wages for employees, and the manufacture of products and services for customers but also pay attention to various things considered essential and valuable to society. CSR obligation is regulated in several laws and regulations, government decisions, and ministerial decrees. These regulations include Law No. 25 of 2007 concerning investment, Law Number 40 of 2007 concerning *PT (Perseroan Terbatas)* or Limited Liability Company (LLC), and Decree of the Minister of SOEs Number Kep-236/MBU/2003 concerning Small Business Partnership Programs of State-Owned Enterprises with Small Businesses and Community Development Programs (*Program Bina Lingkungan – PKBL*). Law Number 40 of 2007 Chapter V Article 74 Paragraphs 1-4 explains the definitions of CSR programs and sanctions imposed for those who do not implement them. However, this law is not enough because it has not described the procedure for its implementation. To reinforce the performance of Law Number 40 of 2007 Article 74 on Limited Liability Companies, the government issued Government Regulation Number 47 of 2012 concerning Social and Environmental Responsibilities of Limited Liability Companies. The government also regulates social and environmental corporate responsibilities to realize sustainable economic development to improve the quality of life and the environment. The improvement is expected to benefit the local community and society in general and the company itself to establish a harmonious, balanced, and environmentally compatible relationship between companies and the environment, values, norms, and cultures of the local community. Companies whose activities deal with natural resources are obliged to carry out Social and Environmental Responsibilities. Such activities must be calculated as company costs carried out with due regard to propriety and fairness.

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One of the State-owned Enterprises (SOEs) consistently carrying out CSR programs is the oil and gas SOE and all levels of its operating companies and subsidiaries/joint venture/corporate partners with upstream to downstream industrial operations and all other business derivatives that constantly interact with stakeholders, especially the surrounding community. Companies are expected to implement programs to alleviate poverty, improve education and health, and care for the natural environment. Oil and gas SOEs can actively participate and significantly realize sustainable economic development through CSR programs. Furthermore, oil and gas SOEs are committed to prioritizing the balance and preservation of nature, the environment, and society to achieve sustainable business growth. The empowerment of Micro, Small, and Medium Enterprises (MSMEs) amid globalization and high business competition has forced MSMEs to be able to face global challenges, such as increasing product and service innovation, developing human resources and technology, and expanding the marketing area. According to the Ministry of Manpower, MSMEs have encountered various obstacles during this Covid-19 pandemic, including declined sales and capitals, hampered distribution, complex raw material supply, decreased production, and worker layoffs. This pandemic has had a significant impact on the survival of MSMEs in Indonesia. The economic crisis experienced by MSMEs has become a major threat to the national economy, considering that MSMEs are the driving force of the domestic economy and the largest labor absorber. Agus Eko Nugroho (2020), as the Head of the Economic Research Center, Indonesian Institute of Sciences (*Lembaga Ilmu Pengetahuan Indonesia – LIPI*), has stated that MSMEs as the pillars of national production are facing threats in the supply and demand, implying the decline in people's welfare. The results of the Rapid Study Survey by *LIPI* on the impact of the Covid-19 pandemic are explained as follows:

1. Survey data shows that during the pandemic, 94.69% of MSMEs experienced a decline in sales. Based on the business scale, a sales decline of more than 75% was experienced by ultra-micro enterprises (49.01%), micro-enterprises (43.3%), small enterprises (40%), and medium enterprises (45.83%). Based on the business age, a sales decline of more than 75% was experienced by enterprises aged 0-5-year (23.27%), 6-10-year (10.9%), and > 10-year (8.84%). Based on the sales method, a sales decline of more than 75% was experienced by enterprises with an offline sales method (47.44%), enterprises with an online sales method (40.17%), and enterprises with an offline and online sales method (39.41%). The Covid-19 pandemic has also caused operating profits to decrease significantly as production costs remain fixed or even increase while the number of sales declines. The increasing business costs during the pandemic include raw materials, transportation, labor, and others.
2. The survey also collects various perceptions of business actors regarding the vulnerability of MSMEs to stop or close their businesses if the pandemic does not end soon. A total of 47.13% of enterprises could only survive until August 2020, 72.02% of enterprises finally stopped operating after November 2020, and 85.42% of enterprises could survive for one year at the longest since the pandemic.
3. MSMEs have several strategic preferences, including looking for new markets, looking for cheaper raw material suppliers, reducing labor, and requesting payment delays.
4. The survey recommends short-term and medium-term priority mitigation measures. The short-term priority mitigation measures that MSMEs can take include creating stimulus on the demand side and encouraging online platforms to expand partnerships with MSMEs. Local governments are also expected to strengthen local chain components, improve MSME product quality and competitiveness through collaboration with research institutions, provide import facilities for raw materials and low-interest loans for MSMEs.
5. Meanwhile, the medium-term priority mitigation measures that MSMEs can take are making an adaptive supply chain for strategic goods and market intelligence for potential new export markets, strengthening the synergy of Banks and Non-Bank Financial Institutions (*Lembaga Keuangan Bukan Bank – LKBB*) in MSME financing, providing trading house and logistic facilities, increasing MSME data accuracy, and developing digital-based MSME clinics. Since the balance cannot be gained naturally, solid and measured government intervention is the right step to restore the economy.

These results indicate that MSMEs are the primary support or the 'backbone of the economy in Indonesia. Thus, attention and management are required to grow and be sustainable, accompanied by increased professionalism continuously. As regulated in Article 5 Law Number 20 of 2008 concerning Micro, Small and Medium Enterprises, the purposes of MSME empowerment are: *first*, to realize a balanced, developing, and equitable national economic structure; *second*, to grow and develop the ability of MSMEs to become solid and independent businesses; and *third*, to increase the roles of MSMEs in regional development, job creation, income distribution, economic growth, and poverty alleviation.

Soegiastuti and Haryanti (2013) suggested that MSMEs are recognized to have a vital role, not only for economic growth but also for an equitable distribution of income. Therefore, Indonesia pays special attention to MSME development, including fostering an environment with a conducive business climate, facilitating and giving access to productive resources, and strengthening entrepreneurship and competitiveness. One of the essential strategies in strengthening MSMEs is partnerships. The government's role can be realized through creating a conducive business climate to build partnerships, providing facilities and other support such as matchmaking facilities, financial assistance, and other needs to bridge the partnership between the two parties.

CSR Programs are a strategic choice for companies to contribute to strengthening and increasing MSME competitiveness. Large companies will not grow and develop properly without the support of MSMEs. Therefore, MSMEs and large companies must collaborate to take advantage of opportunities for the growth and prosperity of the community. Previous

studies have shown that CSR can increase business innovation (Gallego Álvarez, Prado Lorenzo, & García Sánchez, 2011; Zhou, Wang, & Zhao, 2020).

Hadjimanolis and Dickson (2000), Lai, Lui, & Tsang (2016), and Zhang and Chen (2014) have explained that small business innovations are an important subject in entrepreneurial practices carried out to overcome all obstacles, impacts, and strategies to improve small business performance (Huang & Wang, 2011; Song, Ma, & Yu, 2019). Rosli & Sidek (2013) state that small business innovations, both the innovation process and innovation results, improve small business performance. Similarly, Kemp *et al.* (2003) and Pett & Wolff (2011) found that the innovation process improved small business performance.

Studies on innovation ideas continue to evolve. Myers & Marquis (1969) provide a broad definition of innovation, which implies a whole new process through problem-solving to exploit social and economic benefits. Meanwhile, Bessant *et al.* (2005) explain four types of innovations: product, process, organization, and marketing, with a novelty of three categories: development, something new for the company, and radical innovations. Innovations are essential in today's business. Zenko & Mulej (2011) state that development depends on innovations. This idea is in line with Gunday *et al.* (2011) claiming that there is only one constant thing today, change, and, therefore, innovations are necessary.

Studies on entrepreneurship at the organizational level can increase a company's ability to exploit unexplored opportunities (Covin & Slevin, 1989; Lumpkin & Dess, 1996; Wiklund & Shepherd, 2003). According to Covin & Slevin (1989), the elements of entrepreneurial orientation, including proactiveness, risk-taking, and innovativeness, are a series of behaviors affecting organizational innovations and organizational performance sustainability. These elements are highly suitable for small businesses operating in today's rapidly changing environment. This condition forces small enterprises to maintain their business sustainability. Therefore, innovations are very important for and must be owned by every company (Van Overdijk *et al.*, 2003). Innovation is an important component of corporate strategies because it determines the direction of corporate evaluation (Sangran, Sigauw, & Guan, 2009). Based on the explanation above, CSR and entrepreneurial behavior in small businesses can increase innovations of *mitra binaan* of the oil and gas SOEs.

2. Research methods

This research used a quantitative approach that explains phenomena by collecting data with numeric scales to be analyzed using mathematical-based methods or commonly called statistical methods (Creswell, 2017). Sampling was conducted using a purposive random sampling method. Data were then analyzed using Structural Equation Modeling (SEM) with Smart-PLS 3.2.9 software. The unit of analysis in this research is *mitra binaan* of the oil and gas SOE in the West Java Province, Indonesia, through its CSR programs. The population meeting the three criteria included 111 small-scale businesses or companies from 9 cities and regencies mentored by the SOE. Using the Slovin method, the targeted sample size was calculated to be 87 (eighty-seven) respondents.

3.1 Research Hypothesis

This research aimed to determine the direct effect of CSR programs on SME Innovations and Entrepreneurial Orientation and the effect of Entrepreneurial Orientation on SME Innovations. Furthermore, the indirect effect of CSR programs on SME Innovations through Entrepreneurial Orientation was also examined. This research was conducted on *mitra binaan* of the oil and gas SOE in West Java Province. Based on the objectives explained above, the researchers formulated the following hypotheses:

3.2 The Effect of CSR on Entrepreneurial Orientation

CSR is believed to be able to stimulate social empowerment programs. CSR as a strategic entity functions to apply all organizational resources, knowledge, and valuable and beneficial activities for the environment. (Kramer & Porter, 2006). According to Carroll (1979), there are four forms of CSR models: economic responsibility, legal responsibility, ethical responsibility, and discretionary responsibility. Meanwhile, entrepreneurial orientation was measured through three dimensions, namely proactiveness, innovativeness, and risk-taking (Covin & Slevin, 1989). One of the studies on the correlation between CSR and entrepreneurial orientation was conducted by Tuan (2015). This study confirmed a positive relationship between organizational ambidexterity and entrepreneurial orientation moderating by CSR. In addition, CSR is positively correlated with entrepreneurial orientation, which in turn contributes to knowledge sharing in companies (Tuan, 2015). The findings of this study contribute to the knowledge management literature through the role of CSR and entrepreneurial orientation as the driving factors of knowledge sharing. Previous studies have shown that CSR affects entrepreneurial orientation (Tang & Tang, 2018; Tuan, 2015). Based on this explanation, the first hypothesis proposed in this research is as follows:

H₁: *CSR affects Entrepreneurial Orientation.*

3.3 The Effect of CSR on SME Innovations

According to Ferauge (2012), companies will certainly consider the positive impact resulting on the environment in carrying out CSR activities. CSR programs in the form of fostering small businesses aim at improving business performance with innovations. MacGregor, Espinach, & Fontrodona (2007) found that the formulation of innovations is stimulated by CSR programs aimed at products and services with social purposes. Meanwhile, CSR stimulated by innovations may be more aligned with creating social processes and driven by values. Previous studies have shown that CSR positively affects small business innovations (Bahta, Yun, Islam, & Ashfaq, 2020; Szutowski & Ratajczak, 2016). CSR programs stimulate small enterprises to be more innovative with the support of new resources provided by CSR assistance such as capital, knowledge through training, and small businesses fostering. Based on this explanation, the second hypothesis proposed in this research is as follows:

H₂: *CSR affects SME Innovations.*

3.4 The Effect of Entrepreneurial Orientation on SME Innovations

Studies on the relationship between entrepreneurial orientation and innovations have suggested that the congruence between entrepreneurial orientation and developmental orientation in response to market demands contributes significantly to innovation success (Slater, 1997). Covin & Slevin (1989) explain that proactiveness is an aggressive initiative to compete with other companies. Lumpkin & Dess (1996) declare that an aggressive initiative (proactiveness) is a company's ability to see an opportunity and take action in the organization. This finding further confirms that the quality of a company's entrepreneurial activity can respond quickly to environmental changes, resulting in innovations that can bring the company to be successful in a competition (Riley, Kalafatis, & Manoochehri, 2009). Lumpkin & Dess (1996) argue that innovations emphasize the activeness of companies in seeking new ideas and novelty, doing experiments, and providing inspiring solutions in achieving competitive advantage. Some of the previous studies examining the relationship between entrepreneurial orientation and small business innovations include Ma, Guo, & Shen (2019), Ribau, Moreira, & Raposo (2017), Widyastuti, Qosasi, Noor, & Kurniawati (2017). Based on this explanation, the fourth hypothesis proposed in this research is as follows:

H₃: *Entrepreneurial Orientation affects SME Innovations.*

3.5 The Effect of CSR on SME Innovations Through Entrepreneurial Orientation

CSR programs carried out by companies have received much attention from both practitioners and academics. CSR has also increased the need to conduct businesses in new ways and integrate environmental, social, and economic issues and business activity strategies (Hernández, Yañez-Araque, & Moreno-García, 2020). The CSR program in the form of providing loans and mentoring small enterprises carried out by oil and gas SOEs is expected to be a new strategic value for small business actors, ultimately increasing business innovations. Similarly, Lumpkin & Dess (1996) confirmed that such a CSR program could be a strategic value for fostered enterprise partners if seen from the entrepreneurial point of view. Entrepreneurial Orientation describes a strategic orientation to aspects of decision-making styles, practices, and methods (Lumpkin & Dess, 1996). The effect of entrepreneurial orientation on innovativeness is the company's tendency to be willing to try new ideas, do experiments, and develop products and processes (Lumpkin & Dess, 1996). Innovative companies have a great opportunity to win the market competition by providing innovative products. Previous studies have shown that CSR influences innovations through entrepreneurial orientation (Parajuli, 2019; Sirivariskul, 2021). Thus, the fourth hypothesis proposed in this study is as follows:

H₄: *CSR affects SME Innovations through Entrepreneurial Orientation.*

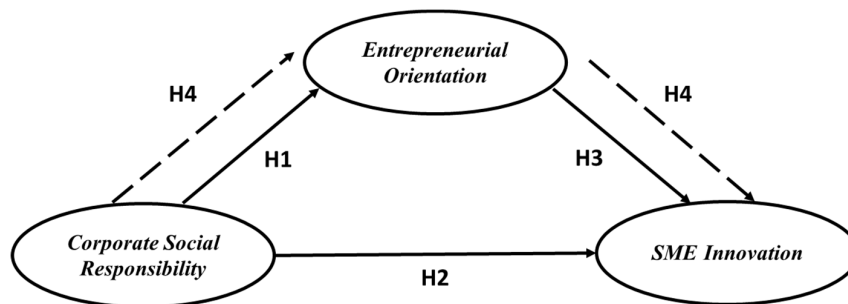


Fig. 1. Research Hypothesis Model

This research applied some arguments that have been tested in previous studies. The references used concerning the included variables were also explained. *First*, the CSR variable referred to Maignan and Ferrell (2004), Mustika, Ratnawati, & Silfi (2017), Turyakira, Venter, & Smith (2014), Van Herpen, Pennings, & Meulenber (2003) with a total of 13 indicators used. *Second*, the Entrepreneurial Orientation (EO) used references from Wolff, Pett, & Ring (2015), with 9 indicators. Lastly, the SME Innovations (SI) used references from Lesakova (2009), Mustika *et al.* (2017), Rosli & Sidek (2013), Wolff *et al.* (2015) with 13 indicators. All research indicators are provided in the appendix.

4. Results and discussion

This research employed an SEM analysis technique with a Partial Least Square (PLS) method. The data analysis was carried out in three stages: an outer model analysis, inner model analysis, and hypothesis testing.

4.1 Outer model analysis

According to Ghazali (2014), in a reliability testing using the composite reliability and Cronbach's alpha, a construct is reliable if the composite reliability is greater than 0.70 and Cronbach's alpha exceeds 0.60. As for the validity testing, a construct is valid if the Average Variance Extract (AVE) is greater than 0.5 (Ghozali, 2014). The results of the outer model analysis are presented in Table 1 below.

Table 1
Cronbach's Alpha, Composite Reliability, and Average Variance Extracted

Variable	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
CSR	0.869	0.899	0.560
Entrepreneurial Orientation	0.892	0.914	0.570
Small Business Innovation	0.921	0.934	0.585

The results of the outer model analysis based on Cronbach's alpha, composite reliability, and AVE as presented in Table 1 indicate that all sizes of criteria were already met. In other words, data in this research were valid and reliable to be further used for inner model analysis.

4.2 Inner model analysis

Inner model testing aims to test the presence of relationships between constructs and R-Squares. The structural model evaluation used p-values to determine the significance of the structural path parameter coefficients and R-Squares to determine the effect of independent latent variables on latent dependent variables and the substantive correlation (effect) between the two. A resistant estimate is not affected by large changes in a small part or small changes in large part of the data. Inner model evaluation can be seen from several indicators, including Coefficient of Determination (R^2), Predictive Relevance (Q^2), and *Goodness of Fit Index* (GoF). The calculation and description of each indicator are presented below.

a. Coefficient of Determination (R^2)

Table 2 below presents the R^2 values calculated using the Smart-PLS 3.2.9 Software.

Table 2
 R^2 Values

Variable	R-Squared	Adjusted R-Squared
Entrepreneurial Orientation	0.760	0.757
Small Business Innovation	0.837	0.833

Chin (1998) states that the R^2 of 0.67 is considered strong, the R^2 of 0.33 value is considered moderate, and the R^2 of 0.19 is considered weak. Thus, it can be said that this model has a strong relationship between the variables analyzed.

b. Predictive Relevance (Q^2)

The Q^2 value can be calculated using the following formula:

$$Q^2 = 1 - (1 - R^2) (1 - R^2) \dots (1 - R_n^2) = 1 - (1 - 0,760) (1 - 0,837) = 0.960$$

This test is conducted to determine the predictive capability with the blindfolding procedure. Chin (1998) argues that a model with a Q^2 value of 0.02 has a low predictive capability, a model with a Q^2 value of 0.15 has a moderate predictive capability, and a model with a Q^2 value of more than 0.35 has a large predictive capability. Based on the calculation results, the Q^2 value in this research was 0.960. Thus, it can be concluded that this research model has a large predictive capability.

c. Goodness of Fit Index (GoF)

The third step of the inner model testing is to test the Goodness of Fit (GoF). The following is the result of GoF calculated manually using the root of the average AVE multiplied by the average R^2 .

$$\text{GoF} \sqrt{\text{AVE} \times R^2} \text{GoF} \sqrt{0.572 \times 0.960^2} \text{GoF} \sqrt{0.572 \times 0.921} \text{GoF} = 0.725$$

According to Tenenhaus (2004), the GoF value of 0.1 is considered small, the GoF value of 0.25 is considered moderate or medium, and the GoF value of more than 0.38 is considered large. Referring to the calculation above, the GoF value in this research was 0.725. This result indicates that the model formed in this research represents real phenomena. Based on the R^2 , Q^2 , and GoF analysis, it can be concluded that the model formed in this research was robust and accurate so that the next stage (hypothesis testing) could be performed.

5. Research hypothesis testing

Hypothesis testing was conducted using SEM-PLS Software with bootstrap, showing the t-count value. If the t-count value exceeds the t-statistic value and the confidence level is 95% (> 1.96), it means the hypothesis shows a significant relationship. The bootstrap results indicating the extent of the relationship between variables are presented in Table 3 below.

Table 3
Results of Hypothesis Testing

Hypotheses	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O STDEV)	P-Value
<i>CSR → Entrepreneurial Orientation</i>	0.872	0.876	0.021	41.625	0.000
<i>CSR → SME Innovations</i>	0.381	0.379	0.109	3.491	0.000
<i>Entrepreneurial Orientation → SME Innovations</i>	0.564	0.567	0.102	5.520	0.000
<i>CSR → SME Innovations → Entrepreneurial Orientation</i>	0.492	0.496	0.090	5.468	0.000

Based on the hypothesis testing, all hypotheses have a t-value of > 1.96 , indicating a positive and significant effect. The hypothesis testing results are presented in Table 4 below.

Table 4
Conclusion of Hypothesis Testing Results

No	Hypotheses	Results
H1	CSR affects Entrepreneurial Orientation	Accepted
H2	CSR has an effect on SME Innovations	Accepted
H3	Entrepreneurial Orientation affects SME Innovations	Accepted
H4	CSR affects SME Innovations through <i>Entrepreneurial Orientation</i>	Accepted

6. Discussion

6.1 The Effect of CSR on Entrepreneurial Orientation

The first hypothesis testing results are empirically consistent with previous studies finding that CSR programs can increase entrepreneurial orientation. The field supervisor confirmed that such assistance programs encouraged small businesses to be more innovative and willing to develop their products. Furthermore, respondents stated that the assistance provided by the company was very useful. Empirically, the first hypothesis testing result is also supported by de la Garza Carranza, Soria, & Estrada (2016) that Social Responsibility programs can increase entrepreneurial orientation. Entrepreneurial orientation can be interpreted as the company's ability to seek innovations, enter new markets, and consider whether planned strategies can create new opportunities Andersson & Evers (2015). Zhuang, Lee, Chang, & Kim (2020) reveal that CSR affects entrepreneurial orientation, specifically for state-controlled enterprises. It takes into account the unique structure of socialism of the best context for comparing two different types of enterprises (state-controlled versus private controlled). In this regard, the government need to emphasize CSR activities among enterprises to solve social problems.

6.2 The Effect of CSR on SME Innovations

The result of the second hypothesis testing is empirically consistent with Dionisio & de Vargas (2020) and Tantayanubutr & Panjakajornsak (2017) that Social Responsibility programs can increase innovations. CSR programs highly benefit small businesses fostered by the oil and gas sectoral SOE. In the form of capital provision, business coaching, and business assistance, CSR programs have encouraged small business actors to become innovative in developing their products. With

business guidance and assistance, small business actors are stimulated to develop their businesses through innovations. Innovations are not merely to make new products. In a broader sense, innovations are divided into product innovations, process innovations, and business system innovations (Lesakova, 2009; Mustika et al., 2017; Rosli & Sidek, 2013; Wolff et al., 2015). Product innovations refer to how small business actors can actively develop a variety of new products. Process innovations refer to how small business actors seek and adopt new solutions for making products. Lastly, business system innovations refer to adopting new business systems from other entrepreneurs for business development. The research results showed that small businesses fostered by the oil and gas sectoral SOE are more inclined to product innovations. In developing their products, small business actors bought some examples of product models trending in the market and then adopted the model and ideas.

6.3 The Effect of Entrepreneurial Orientation on SME Innovations

The results of the third hypothesis testing are empirically consistent with previous studies finding that entrepreneurial orientation can increase small business innovations. This finding was confirmed by the R&D field coordinators of *mitra binaan* of the oil and gas SOE in West Java. Similarly, the respondents (small business as *mitra binaan*) generally admitted increased entrepreneurial orientations within the company. Small businesses can combine creativity, innovation, courage, and work hard in facing risks to establish and maintain their businesses accompanied by officers from the oil and gas SOE. Empirically, the result of this hypothesis testing supports Galindo & Méndez Picazo (2013), Parkman, Holloway, & Sebastiao (2012), Vuorio, Torkkeli, & Sainio (2020); Wahyuni & Sara (2020) that entrepreneurial orientation has a positive and significant effect on the company's innovation ability. Furthermore, K. Y. Wang, Hermens, Huang, & Chelliah (2015) suggest that entrepreneurial orientation is a driving factor of innovations that can create unique products for business survival and growth.

6.4 The Effect of CSR on SME Innovations Through Entrepreneurial Orientation

The fourth hypothesis testing results are empirically consistent with previous studies showing that CSR can increase innovations in small businesses through entrepreneurial orientation. Empirically, this result also supports Voinea, Logger, Rauf, & Roijakkers (2019) and Z. Zhang, Wang, & Jia (2021) stating that CSR significantly influences innovations through entrepreneurial orientation. Entrepreneurial orientation describes strategic orientation on aspects of decision-making styles, practices, and methods (Lumpkin & Dess, 1996) and emphasizes the tendency to proactiveness, innovativeness, and risk-taking (Covin & Slevin, 1988; Lumpkin & Dess, 1996). The influence of entrepreneurial orientation on innovativeness is the company's tendency to try new ideas, do experiments, and develop products and processes (Lumpkin & Dess, 1996). Innovative companies have a great opportunity to win the market competition by providing innovative products. Risk-taking is associated with a willingness to sacrifice and spend large resources with high risks and high-income opportunities (Miller & Friesen, 1978) in Cosulthard (2007). Companies willing to take risks have a high probability of obtaining a better competitive position if the company succeeds in turning risk-taking initiatives into business profits. Companies willing to take risks will also acquire better skills or new skills (Liu, Hou, Yang, & Ding, 2011).

7. Conclusion

The research results provide new insights and contribute to CSR studies. The analysis results indicate that CSR has a positive and significant effect on entrepreneurial orientation and innovations in small businesses. The CSR programs carried out by the oil and gas SOE have encouraged small businesses as *mitra binaan* to innovate and have entrepreneurial orientation. Likewise, entrepreneurial orientation has a positive and significant effect on small business innovations. Entrepreneurial orientation is one of the driving factors of innovations made by small businesses. Furthermore, the analysis results also indicate that CSR has an indirect effect on innovation through entrepreneurial orientation. The strong effect of entrepreneurial orientation makes small businesses as *mitra binaan* of the oil and gas SOE have entrepreneurial behavior and a tendency to try new ideas, conduct experiments, and develop products and processes. With its mediating effect, entrepreneurial orientation encourages small businesses to be proactive, innovative, and high-risk. The research results indicate that entrepreneurial orientation and product innovations exist due to the ability of small businesses to manage the assistance of CSR programs to help them create opportunities to be explored and exploited based on the organization's internal resources. Further research may include additional literature by adding variables related to CSR effects to find out more about the impact of CSR programs. Also, further research is recommended to strengthen the results of this research by using different research sites and bigger populations, for example, throughout Java Island or Indonesia. Further research is also expected to strengthen and confirm the relationship between variables to produce an established theoretical concept. Thus, future researchers are recommended to use different dimensions despite the similar research locus and focus.

References

- Andersson, S., & Evers, N. (2015). International opportunity recognition in international new ventures—a dynamic managerial capabilities perspective. *Journal of International Entrepreneurship*, 13(3), 260–276.
- Bahta, D., Yun, J., Islam, M. R., & Ashfaq, M. (2020). Corporate social responsibility, innovation capability and firm

- performance: evidence from SME. *Social Responsibility Journal*.
- Bessant, J., Lamming, R., Noke, H., & Phillips, W. (2005). Managing innovation beyond the steady-state. *Technovation*, 25(12), 1366–1376. <https://doi.org/10.1016/j.technovation.2005.04.007>
- Carroll, A. B. (1979). A three-dimensional conceptual model of corporate performance. *Academy of Management Review*, 4(4), 497–505.
- Chin, W. W. (1998). *Commentary: Issues and opinions on structural equation modeling*. JSTOR.
- Coulthard, M. (2007). The role of entrepreneurial orientation on firm performance and the potential influence of relational dynamism. *Journal of Global Business and Technology*, 3(1), 29.
- Covin, J. G., & Slevin, D. P. (1988). THE INFLUENCE OF ORGANIZATION STRUCTURE ON THE UTILITY OF AN ENTREPRENEURIAL TOP MANAGEMENT STYLE. *Journal of Management Studies*, 25(3), 217–234. <https://doi.org/10.1111/j.1467-6486.1988.tb00033.x>
- Covin, J. G., & Slevin, D. P. (1989). Strategic management of small firms in hostile and benign environments. *Strategic Management Journal*. <https://doi.org/10.1002/smj.4250100107>
- Creswell, J. W. (2017). *Research design: Qualitative, quantitative, and mixed methods approach*. Sage publications.
- de la Garza Carranza, M. T., Soria, E. G., & Estrada, C. R. (2016). Entrepreneurial orientation of Mexican small business managers. *International Business Research*, 9(11), 157–168.
- Dionisio, M., & de Vargas, E. R. (2020). Corporate social innovation: A systematic literature review. *International Business Review*, 29(2), 101641.
- Ferage, P. (2012). A conceptual framework of corporate social responsibility and innovation. *Global Journal of Business Research*, 6(5), 85–96.
- Galindo, M., & Méndez-Picazo, M. (2013). Innovation, entrepreneurship and economic growth. *Management Decision*.
- Gallego-Álvarez, I., Prado-Lorenzo, J. M., & García-Sánchez, I. (2011). Corporate social responsibility and innovation: A resource-based theory. *Management Decision*.
- Ghozali, I. (2014). *Alternative Structural Equation Modeling Method with Partial Least Squares (PLS)*. Semarang: Diponegoro University Publishing Agency.
- Gunday, G., Ulusoy, G., Kilic, K., & Alpkan, L. (2011). Effects of innovation types on firm performance. *International Journal of Production Economics*, 133(2), 662–676. <https://doi.org/10.1016/j.ijpe.2011.05.014>
- Hadjimanolis, A., & Dickson, K. (2000). Innovation Strategies of SMEs in Cyprus, a Small Developing Country. *International Small Business Journal*. <https://doi.org/10.1177/0266242600184004>
- Hernández, J. P. S.-I., Yañez-Araque, B., & Moreno-García, J. (2020). Moderating effect of firm size on the influence of corporate social responsibility in the economic performance of micro-, small and medium-sized enterprises. *Technological Forecasting and Social Change*, 151, 119774.
- Huang, S. K., & Wang, Y.-L. (2011). Entrepreneurial orientation, learning orientation, and innovation in small and medium enterprises. *Procedia-Social and Behavioral Sciences*, 24, 563–570.
- Kemp, R. G. M., Folkeringa, M., de Jong, J. P. J., & Wubben, E. F. M. (2003). Innovation and firm performance. In *Scientific Analysis of Entrepreneurship and SMEs (SCALES)*. <https://doi.org/10.1504/IJBPM.2000.000072>
- Kramer, M. R., & Porter, M. E. (2006). Estrategia y sociedad: el vínculo entre ventaja competitiva y responsabilidad social corporativa. *Harvard Business Review*, 84(12), 42–56.
- Lai, J., Lui, S. S., & Tsang, E. W. K. (2016). Intrafirm Knowledge Transfer and Employee Innovative Behavior: The Role of Total and Balanced Knowledge Flows. *Journal of Product Innovation Management*, 33(1), 90–103. <https://doi.org/10.1111/jpim.12262>
- Lesakova, L. (2009). Innovations in small and medium enterprises in Slovakia. *Acta Polytechnica Hungarica*, 6(3), 23–34.
- Liu, H., Hou, J., Yang, P., & Ding, X. (2011). Entrepreneurial orientation, organizational capability, and competitive advantage in emerging economies: Evidence from China. *African Journal of Business Management*, 5(10), 3891–3901.
- Lumpkin, G. T., & Dess, G. G. (1996a). Clarifying the entrepreneurial orientation construct and linking it to performance. *Academy of Management Review*. <https://doi.org/10.5465/AMR.1996.9602161568>
- Lumpkin, G. T., & Dess, G. G. (1996b). Clarifying the entrepreneurial orientation construct and linking it to performance. *Academy of Management Review*, 21(1), 135–172. <https://doi.org/10.5465/AMR.1996.9602161568>
- Ma, H., Guo, H., & Shen, R. (2019). Organizational regulatory legitimacy, entrepreneurial orientation, and SME innovation: An optimal distinctiveness perspective. *Technology Analysis & Strategic Management*, 31(7), 833–847.
- MacGregor, S. P., Espinach, X., & Fontrodona, J. (2007). Social innovation: Using design to generate business value through corporate social responsibility. *DS 42: Proceedings of ICED 2007, the 16th International Conference on Engineering Design, Paris, France, 28.-31.07. 2007*.
- Maignan, I., & Ferrell, O. C. (2004). Corporate social responsibility and marketing: An integrative framework. *Journal of the Academy of Marketing Science*, 32(1), 3–19.
- Miller, D., & Friesen, P. H. (1978). Archetypes of Strategy Formulation. *Management Science*, 24(9), 921–933. <https://doi.org/10.1287/mnsc.24.9.921>
- Mustika, M., Ratnawati, V., & Silfi, A. (2017). *Pengaruh Corporate Social Responsibility, Ukuran Perusahaan, Profitabilitas, Leverage, Capital Intensity dan Kepemilikan Keluarga terhadap Agresivitas Pajak (Studi Empiris pada Perusahaan Pertambangan dan Pertanian yang Terdaftar di Bursa Efek Indonesia P. Riau University)*.
- Myers, S., & Marquis, D. (1969). Successful industrial innovation: a study of factors underlying innovation in selected firms. In *National Science Foundation* (Vol. 69). National Science Foundation.

- Parajuli, S. (2019). Transforming corporate governance through effective corporate social responsibility (CSR) and social entrepreneurship orientation in Nepal. *Parajuli, S., Rajbhandari, S., Joshi, A., KC, S. & Bhandari, U. (2019). Transforming Corporate Governance through Effective Corporate Social Responsibility (CSR) and Social Entrepreneurship Orientation in Nepal. Quest Journal of Management and Social Scien, 1(1), 2.*
- Parkman, I. D., Holloway, S. S., & Sebastiao, H. (2012). Creative industries: Aligning entrepreneurial orientation and innovation capacity. *Journal of Research in Marketing and Entrepreneurship.*
- Pett, T. L., & Wolff, J. A. (2011). Examining SME performance: the role of innovation, R&D and internationalization. *International Journal of Entrepreneurial Venturing.* <https://doi.org/10.1504/IJEV.2011.041277>
- Ringle, C. M., Wende, S., and Becker, J.-M. 2015. "SmartPLS 3." Boenningstedt: SmartPLS GmbH, <http://www.smartpls.com>.
- Ribau, C. P., Moreira, A. C., & Raposo, M. (2017). SMEs innovation capabilities and export performance: an entrepreneurial orientation view. *Journal of Business Economics and Management, 18(5), 920–934.*
- Rosli, M. M., & Sidek, S. (2013). The Impact of Innovation on the Performance of Small and Medium Manufacturing Enterprises: Evidence from Malaysia. *Journal of Innovation Management in Small & Medium Enterprise.* <https://doi.org/10.5171/2013.885666>
- Sangran, S., Siguaw, J. A., & Guan, C. (2009). A Comparative Study of Motivational Differences for Online Shopping. *Data Base for Advances in Information Systems, 40(4), 28–42.* <https://doi.org/10.1145/1644953.1644957>
- Sirivariskul, N. (2021). The Empirical Relationship between Corporate Social Responsibility Advantage (CSRA) and Organizational Performance: Moderating Effects of Entrepreneurship Orientation in Thailand. *International Journal of Economics & Business Administration (IJEBA), 9(3), 53–63.*
- Soegiasuti, J., & Haryanti, C. S. (2013). Model Kinerja Pemasaran Usaha Kecil Dan Menengah (Ukm) Di Jawa Tengah. In *Jurnal Ilmiah Dinamika Ekonomi Dan Bisnis (Vol. 1). Universitas 17 Agustus 1945.*
- Song, W., Ma, X., & Yu, H. (2019). Entrepreneurial orientation, interaction orientation, and innovation performance: A model of moderated mediation. *SAGE Open, 9(4), 2158244019885143.*
- Szutowski, D., & Ratajczak, P. (2016). The relation between CSR and innovation. Model approach. *Journal of Entrepreneurship, Management and Innovation, 12(2), 77–94.*
- Tang, Z., & Tang, J. (2018). Stakeholder Corporate Social Responsibility Orientation Congruence, Entrepreneurial Orientation and Environmental Performance of Chinese Small and Medium-sized Enterprises. *British Journal of Management, 29(4), 634–651.* <https://doi.org/10.1111/1467-8551.12255>
- Tantayanubutr, M., & Panjakajornsak, V. (2017). Impact of green innovation on the sustainable performance of thai food industry. *Business and Economic Horizons, 13(2), 192–209.* <https://doi.org/10.15208/beh.2017.15>
- Tuan, L. T. (2015). From corporate social responsibility, through entrepreneurial orientation, to knowledge sharing: A study in Cai Luong (Renovated Theatre) theatre companies. *Learning Organization, 22(2), 74–92.* <https://doi.org/10.1108/TLO-09-2014-0052>
- Turyakira, P., Venter, E., & Smith, E. (2014). The impact of corporate social responsibility factors on the competitiveness of small and medium-sized enterprises. *South African Journal of Economic and Management Sciences, 17(2), 157–172.*
- Van Herpen, E., Pennings, J. M. E., & Meulenber, M. T. G. (2003). *Consumers' evaluations of socially responsible activities in retailing.*
- Van Overdijk, C. D. A., Grigorovich, I. A., Mabee, T., Ray, W. J., Ciborowski, J. J. H., & MacIsaac, H. J. (2003). Microhabitat selection by the invasive amphipod *Echinogammarus ischnus* and native *Gammarus fasciatus* in laboratory experiments and in Lake Erie. *Freshwater Biology, 48(4), 567–578.* <https://doi.org/10.1046/j.1365-2427.2003.01041.x>
- Voinea, C. L., Logger, M., Rauf, F., & Roijackers, N. (2019). Drivers for Sustainable Business Models in Start-Ups: Multiple Case Studies. *Sustainability, 11(24), 6884.*
- Vuorio, A., Torkkeli, L., & Sainio, L.-M. (2020). Service innovation and internationalization in SMEs: antecedents and profitability outcomes. *Journal of International Entrepreneurship, 18(1), 92–123.*
- Wahyuni, N. M., & Sara, I. M. (2020). Market Orientation and Innovation Performance: Mediating Effects of Customer Engagement in SMEs. *Journal of Economics, Business, & Accountancy Ventura, 23(1), 28–37.*
- Wang, K. Y., Hermens, A., Huang, K.-P., & Chelliah, J. (2015). Entrepreneurial orientation and organizational learning on SMEs' innovation. *International Journal of Organizational Innovation.*
- Widyastuti, S., Qosasi, A., Noor, L. S., & Kurniawati, D. (2017). Enhancing the competitive advantage of SMEs through innovation: The role of market and entrepreneurship orientation, learning organizations. *International Journal of Economic Research, 14(20), 203–221.*
- Wiklund, J., & Shepherd, D. (2003). Knowledge-based resources, entrepreneurial orientation, and the performance of small and medium-sized businesses. *Strategic Management Journal.* <https://doi.org/10.1002/smj.360>
- Wolff, J. A., Pett, T. L., & Ring, J. K. (2015). Small firm growth as a function of both learning orientation and entrepreneurial orientation: An empirical analysis. *International Journal of Entrepreneurial Behavior & Research.*
- Zenko, Z., & Mulej, M. (2011). Diffusion of innovative behaviour with social responsibility. *Kybernetes, 40(9), 1258–1272.* <https://doi.org/10.1108/03684921111169378>
- Zhang, J., & Chen, L. (2014). The Review of SMEs Open Innovation Performance. *American Journal of Industrial and Business Management.* <https://doi.org/10.4236/ajibm.2014.412077>
- Zhang, Z., Wang, X., & Jia, M. (2021). Echoes of CEO entrepreneurial orientation: How and when CEO entrepreneurial orientation influences dual CSR activities. *Journal of Business Ethics, 169(4), 609–629.*

- Zhou, H., Wang, Q., & Zhao, X. (2020). Corporate social responsibility and innovation: A comparative study. *Industrial Management & Data Systems*.
- Zhuang, Y., Lee, Y., Chang, X., & Kim, R. B. (2020). Entrepreneurial orientation and corporate social responsibility performance: An empirical study of state-controlled and privately controlled firms in China. *Corporate Social Responsibility and Environmental Management*, 27(1), 383–392. <https://doi.org/10.1002/csr.1872>

Appendices

Corporate Social Responsibility (CSR)

1. CSR Programs help development to focus on fulfilling customer needs.
2. CSR Programs help meet customer demands.
3. CSR Programs help deal with customer complaints.
4. CSR Programs increase revenue without sacrificing customer needs.
5. CSR Programs improve the quality of service to customers.
6. CSR Programs make selling prices affordable for customers.
7. CSR Programs raises awareness of environmental care.
8. CSR Programs support small businesses to involve in local cultural promotion activities.
9. CSR Programs train small businesses to manage environmental waste.
10. CSR Programs help small businesses improve their employees' welfare.
11. CSR Programs help small businesses provide social security to their employees.
12. CSR Programs have a positive impact on the environment through social activities.
13. CSR Programs actively assists community activities.

Entrepreneurial orientation (EO)

1. In general, small businesses pay attention to research processes, business development, and technological innovation.
2. In facing competitors, small businesses are the first element to introduce new products and services.
3. Small businesses tend to be earlier than competitors to introduce new products.
4. In general, small businesses tend to process by-order high-risk products with high profits.
5. When there is uncertainty, small businesses tend to “wait and see” to avoid possible losses.
6. In general, small businesses dare to try new ideas after careful analysis.
7. Small businesses actively pay attention to and respond to competitors' innovations.
8. Small businesses are willing to try new ways to do new things and look for new solutions.
9. Small businesses encourage people to think and act with new approaches.

SME innovation (SI)

1. Small businesses tend to be early adopters of new products.
2. Small businesses actively develop new product variations.
3. Small businesses are actively looking for new products.
4. Small businesses see the importance of creating new products for success.
5. Small businesses can make new products sold by competitors.
6. Small businesses can create new better products than competitors' products
7. Small businesses are always looking for new solutions in improving production processes.
8. Small businesses tend to be early adopters for new production processes.
9. Small business processes are better than competitors.
10. Small businesses recognize the importance of creating new production processes for success.
11. Small businesses are actively looking for new business systems, for example, online selling and goods/services delivery.
12. Small businesses can adopt new business systems from other entrepreneurs.
13. Small businesses are actively looking for internal solutions to develop new systems.



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